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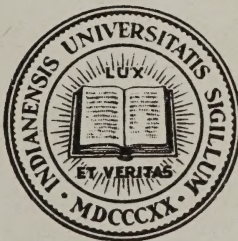
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A Study of Indiana University Alumnae, 1933-1941

By

M. CATHARINE EVANS and KATE HEVNER MUELLER



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A Study of Indiana University Alumnae, 1933-1941

INTRODUCTION

THIS study of women graduates of Indiana University was instigated by the Committee on Women's Education, whose efforts to provide more appropriate curricula for women were hampered by their lack of knowledge about the subsequent careers of the women students after graduation from the University. It seemed important to know the proportion who work, the length of their working periods and their salaries, the proportion who marry and have children, the geographical areas in which they live, their major subjects in the University, their post-college study, and many other items. It seemed also desirable to ask each woman graduate from 1933 to 1941 to make a brief appraisal of her college curriculum.

PROCEDURE. A questionnaire¹ was therefore prepared covering personal history, educational history before and after graduation, and vocational history, including all occupational experience, since graduation. A schedule dividing the University curricula into the four areas, Cultural, Vocational, Homemaking, and Citizenship, was also provided, and an opportunity was given for the women to express varying degrees of satisfaction or dissatisfaction in each area.

These printed forms were sent to all women graduates of the classes from 1933 to 1941, inclusive, for whom there was a recent address, and to a small sampling of 1,000 non-graduates from the same classes. Only one follow-up card was sent.

OTHER COMPARABLE STUDIES IN THIS FIELD. There are two recent studies of college graduates which provide comparable data for the present study of Indiana women graduates. Since they will be referred to frequently, they are summarized here, and they will be designated subsequently as the Greenleaf study and the *Time* study, respectively.

Economic Status of College Alumni. Bulletin 1937, No. 10 of the Office of Education, U.S. Department of the Interior, 1939. The coordinator of the study was Walter J. Greenleaf, Specialist in Higher Education. He used replies from 43,957 graduates of 31 colleges and universities, a 5 per cent sampling of college alumni of the United States, of whom 17,817 are women and 5,755 are women from colleges in the North Central area. The data were collected in 1936, and include reports of eight classes from 1928 through 1935. Since the Indiana study included nine classes, from 1933 to 1941, inclusive, it has sometimes been necessary to exclude the class of 1933 in order to make valid comparisons with the Greenleaf data.

The colleges from the North Central area included by Mr. Greenleaf in this study were the University of Chicago, DePaul University in Chicago, University of Illinois, Wayne University in Detroit, Washington University in St. Louis, Western Reserve University (women) in Cleveland, the University of Toledo, and South Dakota State College.

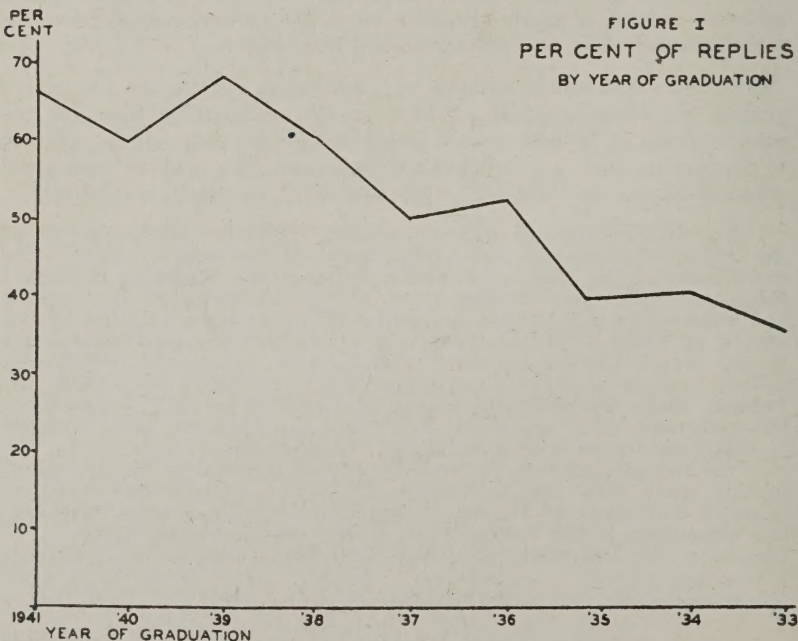
¹ A copy of this questionnaire is included in the appendix.

With the exception of Illinois and South Dakota State, all of these colleges are city colleges, and therefore the group of alumnae identified as North Central may be characterized as more urban than the Indiana alumnae.

The United States College Graduate, made and published by *Time*, Inc. The study in 1941 employed the interview rather than the questionnaire technique, and included a sampling of graduates from 90 per cent of the 1,164 institutions of higher learning in the United States, a total of 12,728 individuals, so distributed as to age, sex, geography, and other factors as to be representative of the whole body of college alumni. The women graduates number 3,747, or 37 per cent of the total. Only 32.7 per cent of these women are under 30 years of age. In other words, the number of women in the age group with which the 1,652 Indiana alumnae can be compared is only 1,225.

REPRESENTATIVENESS OF THE INDIANA UNIVERSITY DATA. Of the 2,675 questionnaires sent to graduates, 1,487, or 56 per cent, replied, and of the 1,000 sent to the non-graduates, only 165, or 16 per cent, replied. There is a continuous decline in the proportion of returns, from 66 per cent of the class of 1941 to 35 per cent of the class of 1933. No comparable data from the *Time* or Greenleaf studies are available. The proportion of total returns, however, is better than the total of returns in the latter study, in which 48.3 per cent of those solicited replied, with as few as 19 per cent and as many as 85 per cent from any single institution.

The proportion of questionnaires returned by successive classes is shown in Figure I.



The replies of the Indiana University graduates were distributed among the various colleges and major fields as given in Table 1.

Table 1. Questionnaire Replies Classified by College and by Undergraduate Major Field.

College	Number	Per Cent	Major Field	Number	Per Cent
Arts and Sciences .	802	54	English, including		
Education	367	25	Journalism,		
Business	140	9	Speech	267	18.6
Nurses	99	7	Social Sciences ..	225	15.1
Music	47	3	Education	143	9.6
Medicine	20	1.3	Foreign Languages	137	9.2
Law	2	0.1	Business	132	8.9
Unknown	10	0.6	Home Economics	104	7.0
			Physical Sciences	81	5.4
Total Graduates	1,487	100.0	Biological Sci-		
			ences	74	5.0
			Nursing	64	4.3
			Physical Educa-		
			tion	59	4.0
			Music	52	3.5
			Fine Arts	22	1.4
			Unknown	127	8.5

Table 2 shows the proportion of graduates in the various fields, as compared with the fields of major study reported by Greenleaf for his 18,000 women in all parts of the United States. In his study, all alumnae who had prepared for teaching were included in the field of education, and therefore 26.3 per cent of the women in that study as compared with 10.3 per cent of Indiana alumnae are reported in that field. Unfortunately, it cannot be estimated how many of the Indiana alumnae who reported themselves in the sciences, languages, etc. were actually preparing themselves to teach these subjects. Undoubtedly this factor would account for the large discrepancy in the education field.

Table 2. Percentage* of Alumnae in Specified Major Fields, from Indiana University and Other Institutions.

<i>Major Field</i>	<i>Indiana Alumnae</i>	<i>Greenleaf Study</i>
English, Journalism, Speech	19.3	16.4
Social Sciences	16.3	13.27
Education	10.3	26.3
Foreign Languages	9.9	7.9
Business	9.6	3.9
Home Economics	7.3	6.8
Physical Sciences	5.9	4.8
Biological Sciences	5.4	4.0
Nursing	4.7	...
Physical Education	4.3	..
Music	3.8	2.7
Fine Arts	1.6	3.1
Library	†	2.5
Philosophy and Religion	†	1.1
Miscellaneous .....	....	6.5

* Unknown excluded from percentage base in these calculations.

† Too small to be calculated.

The fields in which Indiana shows a higher proportion of majors are mainly those in which there is a separate school or professional training beyond that given in the average college, i.e., English (including speech and journalism), physical education, business, and nursing. There is less difference in the proportion of students in the fields of languages, sciences, home economics, or music. Fine arts and library science are the only fields in which Indiana shows a deficit.

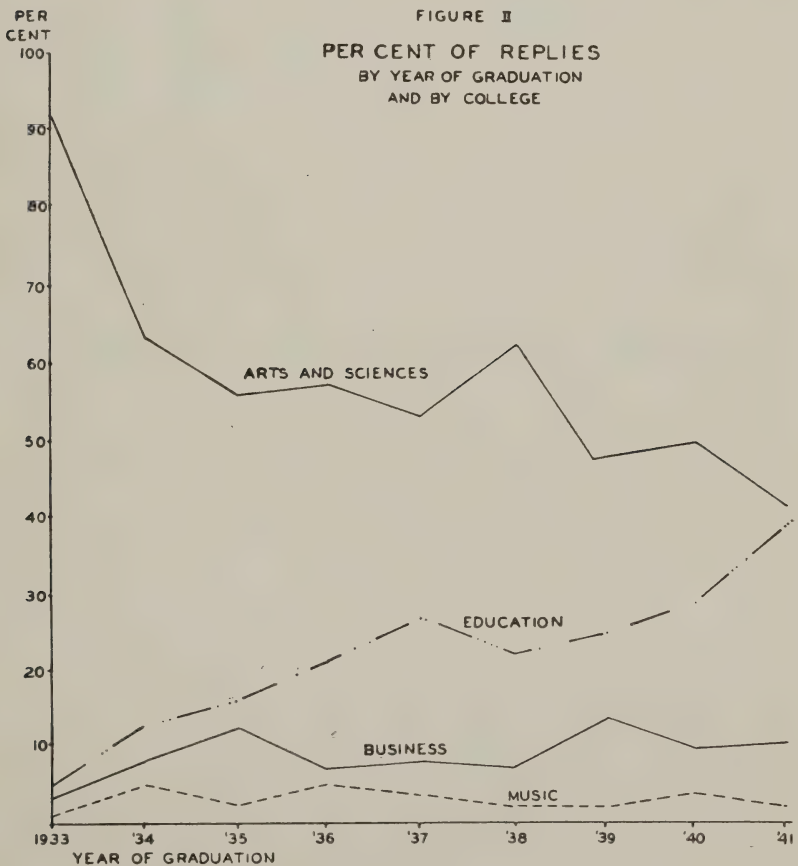
Figure II shows the proportion of alumnae who took their degrees in the College of Arts and Sciences, the Schools of Education, Business, and Music, from 1933 to 1941. The most noticeable feature of the chart is the slow decline of the proportions in the "Arts" as compared with the rise in the School of Education. The School of Business shows an almost imperceptible rise, and the School of Music exhibits some fluctuation but no definite trend. These figures are very similar to the Registrar's records for all graduating women. College of Arts and Sciences graduates dropped from 57 per cent to 38 per cent, School of Education rose from 18 per cent to 40 per cent, and School of Business rose from 7 to 10 per cent from 1933 to 1941.

PERSONAL HISTORY

GEOGRAPHIC DISTRIBUTION OF ALUMNAE. Of the alumnae who returned the questionnaire, 70 per cent live within the state of Indiana, and 17 per cent more live in the North or South Central areas, and therefore 87 per cent of them would fall into the category of "Middle Western." The Registrar's figures show that 89 per cent of all students attending the University in these years came from the state of Indiana, and 6.5 per cent from the North and South Central areas, including, in all, 95.5 per cent of the student body who were Middle

Westerners. Eight per cent of the alumnae live in the North or South Atlantic states as compared with 4 per cent of students from these areas, and 2 per cent of the alumnae live in the Far West and 1 per cent outside the United States as compared with 0.3 and 0.4 per cent of the student body from these areas.

As they grow older there is a tendency for the alumnae to move out of the state. Seventy-five per cent of the three most recent classes are still in the state, 67 per cent of the next three, and 62 per cent of the oldest three. This tendency is confirmed by the report of Greenleaf of eight other colleges in the North Central area. Eight years after graduation, only 80 per cent had remained in the area. Only 85 per cent of Indiana graduates live within the same area one year after graduation, in contrast to the 92 per cent as reported by Greenleaf. This contrast may be accounted for by the large number of urban universities in Greenleaf's study. Students at Chicago, Wash-



ington University in St. Louis, Wayne in Detroit, DePaul in Chicago, Toledo, and Western Reserve are drawn largely from the cities in which they are located, and no doubt find it easier to locate their first jobs without leaving home.

Table 3. Percentage of Alumnae Located in Specified Geographic Areas, One Year and Eight Years after Graduation from Indiana University and Eight Other Institutions of the North Central Area.

Areas	North Central	South Central	New England Middle Atlantic	South Atlantic	Pacific Rocky Mts.	Foreign	Unknown
Indiana Alumnae							
1 year after graduation ..	85	6	4	3	0	0	2
Other colleges							
1 year after graduation ..	92	2	2	1	1	0	2
Indiana							
8 years after graduation ..	81	4	7	7	0	0	1
Other colleges							
8 years after graduation ..	80	2	8	3	4	1	2

When geographic location of the alumnae is tabulated according to the major fields of their college work, it is evident that education, nursing, and music tend to keep the alumnae closer home, while business, sciences, physical education, and foreign languages are more likely to send them farther afield. These trends hold true in general for migration beyond the borders of the state, or beyond the North Central area. In some cases the wide distribution of the graduates in these fields may simply reflect the widespread areas from which their students are attracted.

Table 4. Percentage of Alumnae Who Remain in the State or Area.

<i>Major Field</i>	<i>Per Cent Living within the State of Indiana</i>	<i>Per Cent within the North Central Area</i>
Education	84	89
Music	74	86
Nurses	73	87
Home Economics	73	85
Fine Arts	72	86
English, Journalism, Speech	70	83
Physical Sciences	69	80
Social Sciences	68	82
Business	68	80
Foreign Languages	68	79
Physical Education	68	76
Biological Sciences	52	78

The various schools also show the same pattern whether the migration tendency is measured in terms of the state of Indiana or the North Central area. The proportions of graduates who leave the state and the area for the various schools are given in Table 5.

Table 5. Percentage of Alumnae Who Migrate from the State or Area.

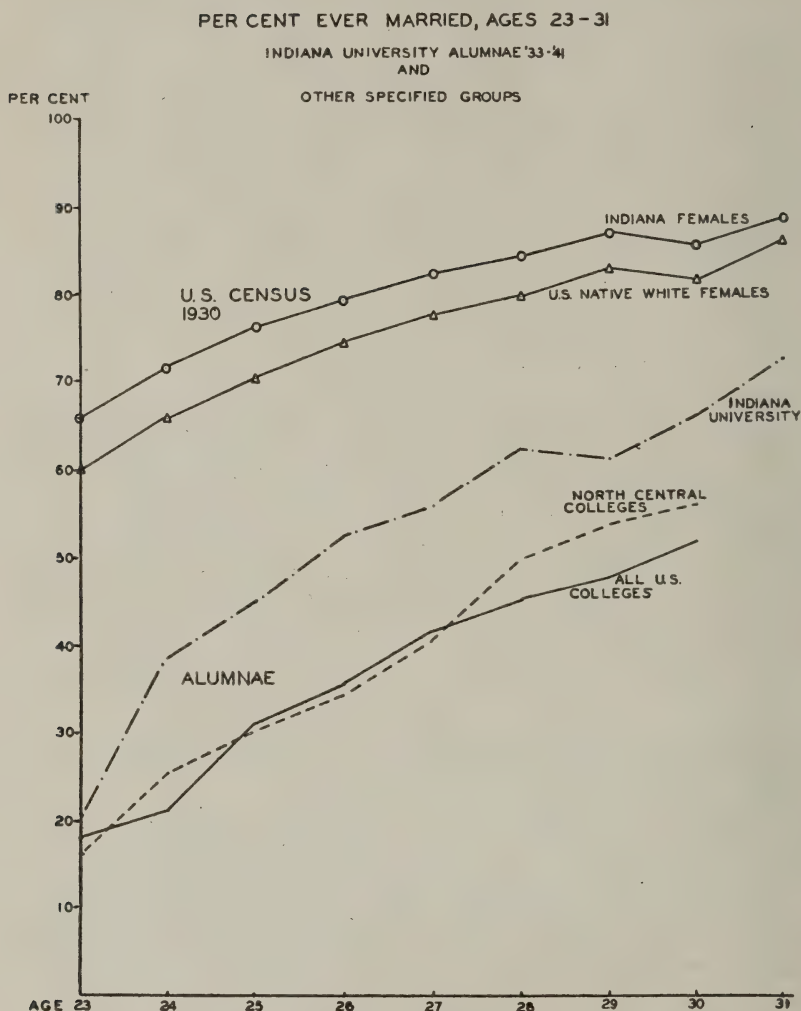
College	Music	Education	Non- Graduate	Nursing	Arts	Business
Leave the state	17	18	24	25	31	34
Leave the area	11	12	13	15	17	23

The Schools of Education and Music (which includes a number of music teachers) keep the alumnae closer home, and the School of Business sends them farther away.

MARRIAGE STATUS OF INDIANA ALUMNAE. The marriage rate for Indiana graduates is much higher than for other college graduates in this area or in the country as a whole. In Figure III are shown the marriage rates for more than 17,000 college women from all sections of the United States and for 6,000 graduates in the North Central area. The higher rate for the Indiana alumnae is consistent and continuous.

In comparison with the general population, it has been established by many studies that the marriage rate for women college graduates is lower than the rate for the general population. In Figure III is presented the rate for the general population from age 23, which corresponds to the average age for Indiana women one year after graduation, to age 31, nine years after graduation. The curves from the 1930 census both for the country as a whole and for the state of Indiana are presented, and it is apparent that the marriage rate for the Indiana residents is again higher than that of other areas.

FIGURE III



There is no reason to believe that these figures reflect any other than the true situation. There is perhaps a tendency for the questionnaires to be returned by the more successful and well adjusted graduates, but this situation obtains everywhere and affects all such studies as these. The fact that 56 per cent of our alumnae returned the questionnaire, in contrast to only 48 per cent of the Greenleaf study (from which these other curves are plotted), would indicate that we have the more representative data.

As would be expected, there is a gradually increasing marriage rate from 20 per cent in the class of '41, 39 per cent in '40 to 67 per cent and 73 per cent in '34 and '33. These sharp increases in the marriage rate with age make it necessary to recalculate our total percentage of married alumnae in order to compare this percentage with figures quoted in the *Time* study, which included only women under 30 (seven classes) and the Greenleaf study, which included only eight classes rather than nine. Every comparison, however, gives the advantage to the Indiana graduate. The proportion of all graduates who have married is about 10 percentage points higher than the proportions quoted in the other two studies. The Indiana divorce rate is also somewhat higher than the rate reported by *Time* or Greenleaf.

Table 6. Percentage of Married Alumnae under 30 Years of Age, from Indiana University and Other Institutions.

	Single	Married	Divorced or Separated	Widowed	Total Who Have Married
<i>Time</i>	66.4	33.1	0.3	0.2	33.6
Indiana	55.9	41.7	1.4	0.9	44.0

Table 7. Percentage of Married Alumnae from Indiana University (1933-41) and Other Institutions (1928-35).

	Single	Married	Divorced or Separated	Widowed	Total Who Have Married
Greenleaf Total	64.0	33.1	1.7	1.2	36
Greenleaf North Central Area	63.6	34.1	1.3	0.6	36
Indiana	54.2	43.4	1.6	0.8	45.8

The proportion of married women is highest among the non-graduates (62.4 per cent), next in the School of Business (54.3 per cent), nurses (53.5 per cent), and College of Arts and Sciences (52.9 per cent), and lowest in the School of Music (34 per cent) and the School of Education (32.1 per cent).

In the major subjects, the departments showing the highest per cent of married alumnae are home economics and foreign languages, 56 per cent each, biological and social sciences, both 54 per cent, English (including journalism and speech) and business both 50 per cent, music 42.3 per cent, physical sciences and nursing 39 per cent, and those showing the smallest per cent married are education, 35 per cent, and physical education, 33.9 per cent.

EDUCATION OF HUSBAND. Of the 800 husbands represented, 82 per cent are college men (61.4 per cent graduated, 20.8 per cent attended), and 55.5 per cent of all these were educated in colleges and universities within the state of Indiana. The largest group, 37.4 per cent, were I.U. men, and the next largest, 6.2 per cent, were from Purdue; in all,

50 per cent of the husbands were educated within the "Big Ten." The largest proportion of husbands with college degrees is found for the College of Arts and Sciences graduates, 69 per cent; next for the School of Business, 63 per cent, the Training School for Nurses, 58.5 per cent, School of Education, 53 per cent, and least for the School of Music, 50 per cent, and the non-graduates, 46.1 per cent.

Nine per cent of the husbands graduated only from high school, and 5.4 per cent are not even high school graduates. Women who have married men with no college training are found in largest proportions in the non-graduate group, 22.5 per cent; Training School for Nurses, 18.9 per cent; School of Education, 18 per cent; School of Music, 12.5 per cent; College of Arts and Sciences, 10.9 per cent; and School of Business, 9.2 per cent. Physical education (25 per cent) and education (20 per cent) are the major subjects with the highest proportions of non-college husbands.

CHILDREN OF INDIANA ALUMNAE. The percentage of alumnae who have children is generally lower for Indiana University than for the institutions as reported by Greenleaf. The comparable figures for Indiana and for Greenleaf's data are given in Table 8. In every comparison, the Indiana figures are low, and only for the older graduates do we find figures that are close to the general averages. It is possible that the contrast in general economic conditions which confronted the class of 1928 (Greenleaf's earliest class) and the class of 1934 (Indiana's earliest class) may to some extent account for the differences presented in this table.

Table 8. Percentage of Alumnae Who Have Children, Indiana University and Other Institutions.

	Years out of College							
	1	2	3	4	5	6	7	8
Without Children—								
Other Colleges, Married Alumnae	78	73	75	64	62	55	46	44
Indiana University, Married Alumnae	88	85	81	71	64	53	48	54
With Children—								
North Central Colleges, Married Alumnae ..	22	27	25	36	38	45	54	56
Indiana University, Married Alumnae	12	15	19	29	36	47	52	46
North Central Colleges, All Alumnae	6	10	10	16	18	25	30	35
Indiana University, All Alumnae	2	6	8	15	19	29	32	31

The number of children for each marriage for the various major fields are in most cases rather unreliable because of the small number of cases. Music and the biological sciences have the highest averages of .86 and .65 children for each marriage, respectively. English, fine arts, and education have each .50 children for each marriage. The lowest averages are found in the cases of physical education (0.1) and business (0.3). Home economics majors and nurses have .36 and .44, respectively.

VOCATIONAL HISTORY

An important consideration in the planning of curricula to meet the needs of women students at Indiana University is the extent to which the women graduates are employed at the end of their college career and the nature of that employment. Data concerning the vocational history of the women in this study are discussed under the following seven headings: First Positions, Number of Positions Held, Unemployment, Present Employment Status, Relationship of Occupation to Undergraduate Major Course, Occupations, and Salaries.

FIRST POSITIONS. A large majority of the Indiana University women in this study desired a position at the end of their college careers. Only 13 per cent of the total group who replied to this item indicated that they were not seeking a position at graduation. A particularly high percentage of the graduates of the Schools of Business, Nursing, and Music desired employment. Ninety-four to 96 per cent of the graduates of these three professional schools were seeking positions in comparison to 84 per cent of the graduates of the College of Arts and Sciences and 85 per cent of the non-graduates. No consistent change in the percentage desiring positions was apparent for the nine graduating classes.

Table 9. Percentage of Alumnae Who Desired a Position at End of College Course, by College and by Year of Graduation.

College	Per Cent	Year of Graduation	Per Cent
Arts and Sciences	84	1941	86
Business	94	1940	86
Education	88	1939	87
Music	96	1938	87
Nursing	94	1937	89
Non-Graduates	85	1936	90
		1935	82
Total	87	1934	92
		1933	86

Number of Months before First Employment. The typical Indiana University woman has been quite successful in finding employment at the end of her college career. Indeed, two-thirds of those who desired a position were placed within three months, and one-half of them in less than two months, and the differences in the speed of placement for the colleges and classes were slight. For example, the School of Business graduates typically found employment within one month while the median for the graduates of the College of Arts and Sciences was more than two months. Likewise for the classes, the typical graduate within the last two years was placed within a month while the median for the classes from 1933 to 1935 was more than two months. On the other hand, 34 per cent of the 1933 graduates were

unable to obtain positions for a period of at least eight months. Apparently this class who left school during the depths of the depression had especial difficulties in finding employment.

Table 10. Percentage of Alumnae Who Obtained Positions in Each Three-month Interval after Graduation, by College and by Year of Graduation.

College	NUMBER OF MONTHS					
	0-3	4-7	8-12	12 or more	Not Indicated	Median
Arts and Sciences	63	7	4	9	17	2.5
Business	65	2	2	2	30	.8
Education	58	4	2	2	34	1.2
Music	69	2	2	11	16	2.0
Nurses	92	0	0	0	8	.5
Non-graduates	71	5	2	2	21	1.8
Total	66	5	3	5	22	1.4

Year of Graduation	NUMBER OF MONTHS					
	0-3	4-7	8-12	12 or more	Not Indicated	Median
1941	66	2	0	1	32	.8
1940	68	5	3	5	19	.9
1939	67	5	2	5	22	1.2
1938	63	5	1	6	25	1.7
1937	64	5	4	6	21	1.6
1936	69	7	3	7	14	1.7
1935	52	8	8	9	24	2.3
1934	66	10	2	8	13	1.9
1933	46	5	13	21	14	2.8

Method of Obtaining First Position. The most advantageous method of obtaining a position, according to the results of this study, is through personal contact or visit to the employer (Table 11). Almost 30 per cent of the alumnae found their first jobs through this method. However, the graduates of the School of Business did not rank this method as high as the graduates of the College of Arts and Sciences and the School of Education.

The University placement bureaus ranked second in importance as an effective method of obtaining the first position. The graduates of the Schools of Business and Education received more help from these bureaus than the College of Arts and Sciences alumnae. This result is not surprising since there is no placement bureau on the campus which directly assumes the responsibility for the graduates of the College of Arts and Sciences. One-fourth or more of the graduates of the two professional schools ranked the University placement bureaus first as a source of assistance. When the graduating classes are compared, there is a trend which indicates that these bureaus have increased in effectiveness of service in the last few years.

Friends and relatives also ranked high as sources of assistance in finding first positions. A decrease in recent years in the importance of these two sources can be noted from the class percentages.

Table 11. Percentage of Alumnae Who Checked Specified Sources as the Most Important Aids for Obtaining First Positions, by College and by Year of Graduation.

Source of Assistance	College			All Graduates
	Arts and Sciences	Business	Education	
(1) Personal contact or visit	29.7	17.7	27.6	28.7
(2) University placement bureaus	14.1	27.7	24.5	16.4
(3) Friends	12.1	14.6	10.3	11.9
(4) Family and relatives	10.9	5.4	9.7	8.8
(5) Letter of application	6.4	5.4	5.5	7.7
(6) Professor or dean	6.4	8.5	8.6	7.4
(7) Commercial agencies	7.5	13.1	3.8	6.1
(8) Former employers	2.3	1.5	4.1	2.7
(9) Advertisement	0	0	0	0
(10) Others	6.5	3.9	3.8	6.3
No response	4.2	2.3	2.1	3.8

Source of Assistance	Year of Graduation								
	1941	1940	1939	1938	1937	1936	1935	1934	1933
(1) Personal contact or visit	21.5	33.5	29.9	23.3	25.2	28.0	23.9	36.1	25.0
(2) University place- ment bureaus ...	27.2	25.9	18.0	19.6	19.7	7.5	6.0	4.1	3.6
(3) Friends	11.3	8.1	9.3	8.0	11.0	15.9	16.4	16.5	19.6
(4) Family and relatives	7.2	4.9	6.2	9.8	9.5	15.0	10.5	12.4	10.7
(5) Letter of application	8.2	7.0	7.7	9.2	6.3	7.5	10.5	6.2	10.7
(6) Professor or dean	7.2	4.9	9.8	8.6	8.7	8.4	10.5	5.2	3.6
(7) Commercial agencies	5.1	5.4	8.3	6.8	7.9	7.5	3.0	4.1	10.7
(8) Former employers	3.1	3.8	2.1	2.5	3.2	1.0	6.0	1.0	1.8
(9) Advertisement	0	0	0	0	0	0	0	0	0
(10) Others	4.1	4.3	6.7	9.2	4.7	6.5	10.5	11.3	5.4
No response	5.1	2.2	2.1	3.1	3.9	2.8	3.0	3.1	8.9

NUMBER OF POSITIONS HELD. The large majority of Indiana University women in this study have been employed at some time following graduation. Only 9 per cent of the 1,652 women who responded in this study have never held a position. However, it is important to note that one-half of them have held no more than one position, and just 7 per cent have held as many as four different jobs. The recency of graduation, of course, has an effect on the number of positions; the median for the graduates in the classes from 1933 to 1938 is two positions in comparison to one position for the three more recent class-

es. The number of positions held is surprisingly small, but it should be emphasized that 91 per cent of the alumnae of this University are employed in at least one position following graduation. This percentage for Indiana women is higher than the percentage reported for the graduates of Vassar College² from 1927 to 1937. Only 67 per cent of the Vassar alumnae have been gainfully employed at any time.

Table 12. Percentage of Alumnae Holding Specified Number of Positions, by Year of Graduation.

Year of Graduation	Number of Positions					
	0	1	2	3	4 or more	Median
1941	13	63	16	6	2	1
1940	6	53	28	8	5	1
1939	8	44	28	14	6	1
1938	6	40	28	15	11	2
1937	5	36	29	19	11	2
1936	5	33	27	20	15	2
1935	10	40	30	10	10	2
1934	6	33	29	18	14	2
1933	12	34	19	23	12	2
Total	9	44	26	14	7	1

Table 13. Percentage of Alumnae Involuntarily Unemployed since Graduation, by College, by Undergraduate Major Field, and by Year of Graduation.

College and Per Cent Unemployed

Arts and Sciences	22	Music	23
Business	11	Nursing	2
Education	11	Non-graduates	15
			..
		Total	16

Major Field and Per Cent Unemployed

Nursing	2	Biological Science	19
Home Economics	10	Physical Science	21
Physical Education	12	English	21
Education	13	Fine Arts and Music	22
Business	14	Social Science	24

Year of Graduation and Per Cent Unemployment

1941	9	1936	21
1940	13	1935	14
1939	17	1934	22
1938	18	1933	33
1937	19		

² Rogers, Agnes, *Vassar Women, an Informal Study*, Vassar College, Poughkeepsie, New York, 1940. Page 113.

UNEMPLOYMENT OF INDIANA ALUMNAE. Only 16 per cent of the Indiana University women in this study indicated that they had been unemployed at any time when they desired a position (Table 13). For the colleges, the percentage of unemployed tended to decrease as the vocational emphasis increased. For example, only 2 per cent of the graduates of the School for Nurses have been unemployed in comparison to 22 and 23 per cent for the College of Arts and Sciences and the School of Music. The percentage of unemployed was 11 for the graduates of both the Schools of Business and Education. Likewise, the percentage of unemployed was less for the more vocational major fields of nursing, home economics, physical education, education, and business than for the more cultural major fields of social sciences, fine arts and music, English, and the biological and physical sciences.

In general, the percentage of involuntary unemployment has increased with the number of years since graduation. Only 9 per cent of the class of 1941 have been unemployed in comparison to 33 per cent for the class of 1933. Again, the high percentage of unemployment for this latter class probably reflects the effect of the depression period.

Length of Unemployment. Of the group of women who have suffered involuntary unemployment since graduation, about three-fourths of them have been unemployed only once, and the median length of this period was five months (Table 14). One-fourth of them were unemployed for a period of two months or less while another one-fourth were unemployed over nine months. There seemed to be no particular relationship between college or major subject and length of unemployment, although the size of the groups makes comparisons unreliable.

A positive relationship between the number of years since graduation and median number of months of unemployment can be noted. The median increased from three months for the classes of 1939 to 1941 to five months for the classes of 1936 to 1938, and to more than nine months for the classes of 1933 to 1935.

Table 14. Length of Involuntary Unemployment of Alumnae, by Year of Graduation.

Year of Graduation	Median Times Unemployed	Number of Months Unemployed		
		Q1	Median	Q3
Classes from 1941 to 1939	1	2	3	9
Classes from 1938 to 1936	1	2	5	Over 9
Classes from 1935 to 1933	1	4	Over 9	Over 9
Total	1	2	5	Over 9

Comparison with Other Colleges. It would seem that Indiana alumnae have been particularly fortunate in comparison with alumnae

of other colleges in avoiding unemployment.³ Only 16 per cent have suffered involuntary unemployment and the median period of unemployment was five months. In contrast, Pace⁴ reported in a study of alumni of Minnesota University that 30 per cent of the Minnesota women had been out of a job since graduation and that the median period of unemployment was nine months. In the Greenleaf study, 44 per cent of the North Central alumnae for the classes of 1928-35 had been unemployed and the median length of unemployment was seven months.

Table 15. Percentage of Unemployed and Length of Unemployment of Alumnae from Indiana University and Other Institutions.

	<i>Per Cent Unemployed</i>	<i>Median Number of Months Unemployed</i>
1. Indiana University	16	5
2. University of Minnesota	30	9
3. Six Universities in the North Central region—(Greenleaf) ...	44	7

PRESENT EMPLOYMENT STATUS. Sixty-five per cent of this alumnae group were either permanently or temporarily employed at the time they answered this questionnaire (Table 16). Thirty-one per cent classified themselves as housewives, and 3 per cent as students. Only 6 per cent indicated that they were unemployed but desired employment, and apparently most of these six per cent were housewives or students. In comparison with other colleges, Indiana University is typical in the percentage of recent alumnae now employed, but it has a rather high percentage of alumnae who are housewives.

Table 16. Percentage of Alumnae in Each Employment Status, from Indiana University and Other Institutions.

	Indiana University	Time Study	Greenleaf
Employed	65	66	69
Housewife	31*	25	23
Student	3*	3	3
Unemployed	6*	5	5
Total Percentage	105*	99	100

* Some duplication in figures for unemployed and for housewife and student.

The recency of graduation seems to be an important factor in the employment status of Indiana alumnae (Table 17). Fifty-seven per cent of the graduates of the last three classes were permanently employed in contrast to 43 per cent for the classes from 1933 to 1935.

³ The phrasing of the item in this study may have contributed to this result. In this study the question was: "Have you been unemployed at any time when you desired a position?" In the Greenleaf study the question was: "How many months idle since graduation?" The delimiting of unemployment to a period they desired a position may partially explain the smaller percentage of unemployment among Indiana alumnae.

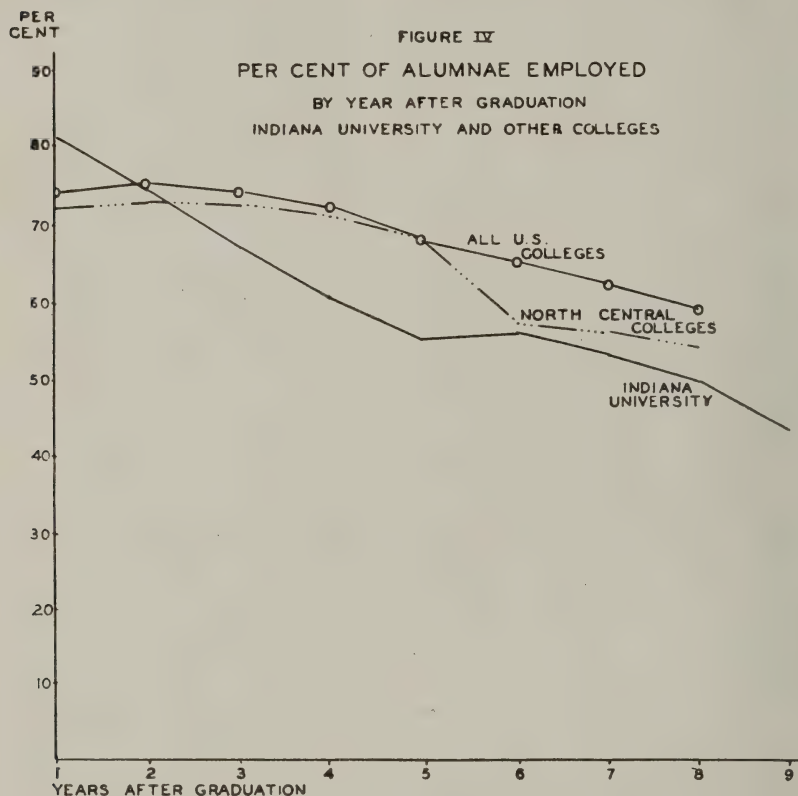
⁴ Pace, Robert, *They Went to College*, University of Minnesota Press, Minneapolis, Minnesota, 1942.

Table 17. Percentage of Alumnae in Each Employment Status, by Year of Graduation, by College, and by Undergraduate Major Field.

Year of Graduation	Employment Status				
	Permanent	Temporary	Housewife*	Student*	Unemployed*
1941 ..	59	22	8	6	6
1940 ..	56	18	20	2	7
1939 ..	56	11	30	2	6
1938 ..	48	13	35	4	5
1937 ..	47	8	41	2	6
1936 ..	48	8	44	1	4
1935 ..	50	3	41	2	5
1934 ..	41	9	47	2	8
1933 ..	34	9	57	0	6
College					
Arts and Sciences	44	13	37	4	7
Business	51	6	39	0	2
Education	69	15	14	1	5
Music ..	47	28	21	2	11
Nursing ..	47	9	38	2	4
Non-graduates ..	41	13	43	1	7
Total Graduates ..	52	13	31	3	6
Major Field					
Education	65	19	17	0	6
Physical Education...	64	15	17	2	5
Nursing	61	9	25	2	3
Business	55	8	33	0	2
Physical Sciences	52	10	26	11	2
English	51	11	35	2	7
Home Economics	46	13	38	1	5
Social Science	43	12	39	5	8
Foreign Languages	40	17	37	5	7
Biological Sciences	39	14	39	4	7
Fine Arts and Music	38	19	38	3	9

* Some duplication in figures for housewife and student, and for unemployed.

The effect of recency is even more strikingly illustrated by a comparison of the classes of 1941 and 1933, with 81 per cent of the 1941 graduates permanently or temporarily employed and 8 per cent housewives, while only 43 per cent of the 1933 graduates were employed, but 57 per cent were housewives. Indeed, as is to be expected, there was a consistent decline in the percentage employed and a rise in the percentage of housewives with an increase in the number of years since graduation. However, there was only a slight variation from class to class in the percentage now unemployed who desired a position.



Apparently, the Indiana alumnae withdraw more rapidly from the professional and business fields than the alumnae of other institutions. At least, this difference can be observed in the employment curves of Indiana University and the colleges in the Greenleaf study (Figure IV). Although both curves show an increasing decline in the percentage of women graduates employed according to the number of years out of college, the Indiana classes show a steady and rapid decline except in the sixth year, while the decline for the Greenleaf colleges begins with the second year but is much more gradual, particularly for the first four or five years. Perhaps the more rapid decline in the employment curve for Indiana alumnae is partly due to the higher marriage rate noted earlier.

College and major field were less important factors than recency of graduation in relation to present employment status (Table 17). Nevertheless, the percentage of employed graduates was much higher for the School of Education than for the College of Arts and Sciences and the School of Business and for the non-graduates. Likewise, there was a larger percentage of employment among the more vocational majors (education, physical education, and nursing) than for the liberal arts major groups (biological sciences, social sciences, fine arts and music, and the foreign languages). In each comparison the smaller percentage of employed was accompanied by a higher percentage of housewives. Three majors, business, physical sciences, and nursing, had a small percentage of involuntary unemployment.

RELATIONSHIP OF OCCUPATION TO UNDERGRADUATE MAJOR COURSE. The previous discussion has indicated that Indiana alumnae have been successful both in obtaining employment at graduation and in continuing to hold a position whenever they desired one. The question now arises as to whether their university education has been directly helpful in terms of the type of positions obtained.

First Position. The first employment of two-thirds of Indiana University women was in a field closely related to the major course of study in the University (Table 18). The remaining one-third indicated either that there was little or no relationship between their college majors and first jobs or failed to respond to this item. The Indiana alumnae were more successful in finding positions related to their majors at graduation than the alumnae of the North Central colleges in the Greenleaf study. Only 57 per cent of the women in this latter study described their first positions as related to their undergraduate major fields while for 66 per cent of the Indiana University women their college education had direct occupational value.

Differences according to the school attended at Indiana University are striking. Eighty per cent or more of the graduates of the Schools of Business, Education, Music, and Nursing obtained their first jobs in fields related to their university majors in contrast to only 49 per cent of the graduates of the College of Arts and Sciences. Such a difference probably is to be expected since obviously there is less specialization in the curricula of this college than in the professional schools. The same trend was evident in the percentages for the major fields. The more specialized and vocational the college major, the higher is the percentage who find their first positions in fields related to the major. Table 18 shows that the relationship was closer for the majors in nursing, education, business, physical education, and home economics than for the majors in English, foreign languages, and biological sciences.

Table 18. Percentage of Alumnae Who Reported Close Relationship of College Major to First Position and to Present Occupation, by College, by Undergraduate Major Field, and by Year of Graduation.

<i>College</i>	<i>First Position</i>	<i>Present Occupation</i>
Arts and Sciences	49	42
Business	83	53
Education	83	77
Music	81	68
Nursing	97	71
Non-Graduates	60	41
	—	—
Total Graduates	66	56
<i>Major Field</i>		
Nursing	95	80
Education	95	75
Physical Education	85	71
Home Economics	73	78
Fine Arts and Music	73	52
Business	86	56
Physical Sciences	54	54
English	50	40
Foreign Languages	42	39
Biological Sciences	32	27
<i>Year of Graduation</i>		
1941	65	71
1940	65	58
1939	67	54
1938	66	50
1937	66	51
1936	65	60
1935	68	51
1934	67	44
1933	45	28

The effect of year of graduation was less clear. In fact, the differences in percentages for the last eight classes were negligible, and only the class of 1933 was conspicuously low in the closeness of relationship between the first job and the major field. The class of 1933 was also low in the Greenleaf study, and this variation for the class of 1933 probably reflects the depth of the depression in which the class graduated.

Present Occupation. The present occupations of the Indiana University alumnae in this study were less closely related to their majors than their first positions. Only 56 per cent, i.e., 10 points less, indicated that their present occupations were closely related to their undergraduate majors (Table 18). A similar trend was noted in the Greenleaf study where "there appears to be a tendency for men to find work eventually more in line with their specialization in college

while women find the present work less in line with their majors."⁵

This decline in relationship to present occupation was characteristic of women graduates of all the colleges at Indiana University and of all majors with the exception of home economics. The home economics major ranked high in percentage of those married and the close relationship of the occupation of housewife to this major is evident. Indeed, the decline in relationship which has been noted for the other major fields and the colleges probably reflects the high percentage whose present occupation is homemaking. For example, since 39 per cent of the graduates of the School of Business are now housewives, it is not surprising that only 53 per cent felt that their present occupations were closely related to their college majors in comparison to 83 per cent for the first positions. The increasing proportion of housewives is perhaps the one most important factor in the constant decline in closeness of relationship of major field to present occupation for the classes of 1941 to 1933.

Satisfaction with Present Employment. How well satisfied are I.U. women with the positions which they now hold? Of the group of more than 1,000 in this study who are now employed, about one-fourth desire another type of position. The graduates of the School for Nurses are highly satisfied with their profession; only 8 per cent of them expressed an interest in another occupation. In sharp contrast to the nurses, 28 per cent of the College of Arts and Sciences graduates expressed dissatisfaction with their present occupation. The percentages for the Schools of Business, Education, and Music showed no significant variation from those of the total group. Apparently, the graduates of the College of Arts and Sciences, which does not emphasize professional training, are less successful than the other groups in obtaining satisfactory and congenial positions. For the major groups, the majors in nursing and physical science tended to rank high in satisfaction with their present position while the English and biological science majors ranked low. There was no consistent trend for the successive classes.

Table 19. Percentage of Alumnae Dissatisfied with Present Employment, by College and by Undergraduate Major Field.

<i>College</i>	<i>Per Cent Dissatisfied</i>	<i>Major Field</i>	<i>Per Cent Dissatisfied</i>
Arts and Sciences.....	28	Nurse	9
Business	25	Physical Science	13
Education	23	Social Science	22
Music	24	Education	22
Nursing	8	Physical Education ...	25
Non-Graduates	24	Foreign Languages ...	26
	—	Fine Arts and Music ..	26
Total	24	Home Economics	28
		Business	28
		English	32
		Biological Science	33

⁵ Greenleaf, Walter J., *Economic Status of College Alumni*, United States Printing Office, Washington, D.C., 1939. Page 28.

OCCUPATIONS OF INDIANA UNIVERSITY WOMEN. The first position and the present or last position of the women in this study were classified according to the socio-economic census grouping⁶ as professional, proprietor and managerial, clerical, skilled, semiskilled, and unskilled. The professional category included the eight sub-groups: teaching, home economics, writing, law, medicine, nursing, social work, and a miscellaneous group of professions such as research scientist, actress, artist, librarian, personnel, musician, designer, and religious work. The clerical category included the three sub-groups of sales, secretarial and stenographic, and such other clerks as telephone operators, advertising agents, decorators, technicians and laboratory assistants, dental and doctor assistants, library assistants, bookkeepers, and statistical clerks.

The majority of Indiana University women enter the professions; in fact, the first and last positions of more than 70 per cent of the 1,500 employed women in this study were in that category. One-fourth of the positions were clerical, one per cent proprietor and managerial, and less than one per cent were skilled, semiskilled, and unskilled.

The types of professions entered are of interest. One-half of these women were in educational work. Their first positions were in teaching, and they continue in this profession as long as they are employed. Of the professional fields other than education, the largest proportion of alumnae entered nursing (11 per cent), while another 6 per cent were in social work. The others were in writing, medicine, and a miscellaneous group of professions. Of the one-fourth who became clerical workers, the majority were secretaries or office clerks, and less than 5 per cent were in the sales field. There was little shift in any of these percentages between the first and the last positions. Therefore, in the future, unless specified, the data given will be for the last position.

By College. Certain differences can be noted in the types of work entered by the graduates of various colleges (Table 20). As one would expect, the graduates of the Training School for Nurses almost without exception entered the nursing field. Likewise, the majority of the graduates of both the Schools of Education and Music entered educational work while the School of Business graduates either entered the clerical field or became commercial teachers. The College of Arts and Sciences graduates tended to enter a much wider variety of fields: 41 per cent teaching, 30 per cent clerical, 9 per cent social work, also writing, home economics, nursing, etc. The School of Business, of course, had few who entered professional fields in comparison with the other colleges.

By Major Field. From 69 to 87 per cent of the majors in education, physical education, and fine arts and music entered educational work (Table 21). Of course, the majors in nursing and business tended to enter their respective fields. There was a greater range in the occupations which the majors in the less professional and more

⁶ Edwards, Alba M., *A Social Economic Grouping of the Gainful Workers of the United States*, Washington, D.C., 1938.

Table 20. Percentage of Alumnae in Specified Occupations for Present (or Last) Positions, by College.

	Arts and Sciences	Business	Education	Music	Nursing	Non-Graduates	All Graduates
I. Professional	67	29	94	86	99	58	74
Teaching	41	26	84	83	1	49	49*
Writing	3	0	0	0	0	0	2
Home Economics ..	3	0	0	0	0	0	2
Nursing	3	0	6	0	97	4	11
Social Work	9	1	3	0	0	1	6
Miscellaneous ..	8	2	1	3	1	4	4
II. Clerical	30	71	5	11	1	39	25
Sales	4	2	0	2	0	4	2
Secretarial ...	14	56	3	4	0	22	14
Other Clerks ..	13	13	2	4	0	14	9
III. Proprietor and Managerial ...	1	0	<1	2	0	2	1
IV. Skilled, Semi- and Unskilled .	<1	0	0	0	0	1	<1

* This percentage was divided thus: 28 per cent high school teachers, 9 per cent elementary school teachers, 12 per cent college teachers, executives, specialists, and miscellaneous educational positions.

cultural fields entered. Of the English majors, 46 per cent became teachers, 33 per cent clerical workers, 5 per cent writers and journalists, and 4 per cent social workers. Approximately an equal number of the physical science majors entered teaching and the clerical field, and the remaining one-fourth such miscellaneous professions as research and laboratory work, library science, and nursing. The biological science group which included psychology majors entered an unusually wide variety of occupations; the most common ones in order were: clerical, teaching, nursing, social work, miscellaneous group of professions, and writing. Twenty-three per cent of the social studies majors became social workers, but 35 per cent became teachers, and 28 per cent clerical workers. The home economics graduates made a significant shift from their first to their present or last position. Sixty-two per cent of their first positions were in teaching and 10 per cent in the home economics field other than teaching, but for the last positions these percentages changed to 52 for teaching and 21 for other home economics work.

By Year of Graduation. Little relationship between year of graduation and fields of work can be noted (Table 22). Indeed, the lack of variation in percentages for the classes from 1934 through 1941 is remarkable. Only the class of 1933 showed any unusual variation from the percentages for all classes and between the first and the last posi-

Table 21. Percentage of Alumnae in Specified Occupations for Present (or Last) Positions, by Undergraduate Major Field.

	English	Language	Physical Science	Biological Science	Social Science	Fine Arts and Music	Home Economics	Physical Education	Education	Business	Nursing
I. Professional	62	66	64	70	70	75	78	95	92	26	98
Teaching	46	55	42	23	35	69	52*	83	87	23	0
Writing	5	1	0	7	2	0	1	0	0	0	0
Home Economics	0	0	0	2	0	0	21†	0	0	0	0
Nursing	0	2	4	17	4	0	0	0	2	0	98
Social Work	4	3	0	10	23	1	0	10	1	1	0
Miscellaneous	7	5	18	11	7	5	4	2	2	2	0
II. Clerical	33	33	35	28	28	24	18	5	8	73	2
Sales	4	2	1	3	2	3	6	0	0	2	0
Secretarial	14	19	17	12	16	10	7	0	5	58	0
Other Clerks	15	11	16	13	10	10	6	5	3	13	2
III. Proprietor and Managers	2	1	0	0	1	1	4	0	0	1	0
IV. Skilled, Semi-skilled and Unskilled	2	0	1	2	1	0	0	0	0	0	0

* This per cent was 62 for the first position.

† This per cent was 10 for the first position.

tions. At graduation, only 30 per cent of this class found teaching positions in comparison to 50 per cent for all classes. On the other hand, a much larger percentage, 41, went into the clerical fields and 22 per cent into social work. For the last positions of the 1933 class, the percentage in clerical fields dropped to below 30 per cent and the professions rose to 69 per cent. The period of depression which this class faced at graduation probably contributes to the shift from clerical to professional types of positions and also to the high percentage who entered social work, since the depression created an unusual demand for social workers.

Comparison to Other Institutions. It is rather unsatisfactory to attempt to compare the occupations of Indiana alumnae with those of the alumnae in the other three studies since the classification of occupations in all four studies differed. However, there are some common categories which permit comparison (Table 23).

Seventy-four per cent of Indiana University alumnae entered professional fields in contrast to 60 to 67 per cent of the alumnae in the other studies. Since the classifications differed, the significance of this difference must be questioned, but there is a clear indication that Indiana alumnae are, at least, as successful as alumnae of other institutions in the finding of professional employment.

Almost one-half of the alumnae of Indiana University and of the 30 colleges in the Greenleaf study enter teaching. This percentage is less than the corresponding one for the alumnae in the *Times* study, but it is higher than for the North Central alumnae in the Greenleaf study and for Vassar College. In fact, only 26 per cent of the Vassar classes of 1927-37 and 39 per cent of the North Central alumnae became teachers. The type of student group probably is an important factor in this difference. At least, five of the six universities in the North Central area are in large cities, and Vassar also draws heavily from urban areas. Certainly a wider variety of professions is easily open to these alumnae in contrast to the more limited opportunities in the communities of Indiana which are much less urban.

Two other comparisons are of interest. The percentage of Indiana women who became nurses was unusually high. The effect of the presence of a professional school of nursing at this University is clear. The proportion of the graduates of Indiana University who enter clerical occupations was almost identical with the other two studies. Roughly one-fourth of the alumnae in the three studies became clerical workers.

SALARIES OF INDIANA UNIVERSITY ALUMNAE. The median first salary of the 1,200 alumnae of Indiana University who reported was \$1,131 a year. However, one-fourth of them made \$840 or less, while the upper one-fourth received salaries of \$1,349 or above. In the last position, the median salary had increased to \$1,360. Likewise, the salaries in the last position of the lower fourth were as high as \$1,122 and above \$1,693 for the upper fourth.

The Indiana median of \$1,360 for the last position was not as high as the median salaries for the Vassar alumnae and for the alumnae in the *Time* study of the similar age groupings, but the differences

Table 23. Percentage of Alumnae in Specified Occupations, from Indiana University and Other Institutions.

	Indiana	Greenleaf		Time	Vassar
		North Central	Total		
Total—Professional	74	63	67	64	60
Teachers	49	39	48	57	26
Other Professions ...	25	24	19	7	34
Writing	2	..	..	..	8
Home Economics ..	2	..	..	..	..
Medicine	1	..	..	4	1
Nursing	11	1	2	..	1
Social Work	6	..	..	..	7
Research .....	..	..	..	..	7
Miscellaneous	4	..	..	..	..
Total—Clerical	25	..	..	26	26
Sales	2	..	..	..	..
Secretarial	14	..	..	..	..
Other Clerks	9	..	..	..	..
Proprietors and					
Managerial	1	..	..	<1	..
Skilled, Unskilled,					
Semiskilled	<1	..	..	9	..
Business .....	..	..	..	..	13
Trades .....	..	4	4	..	..
Transportation and					
Communication .....	..	<1	<1	..	..
General, including					
Secretarial .....	..	32	29	..	..

in salaries were less than \$50 for both cases (Table 24). *Time* found considerable variation in salaries according to the section of the country, and the Indiana median was almost \$100 less than the similar salary for the East North Central region which included Indiana. However, the Indiana salary was \$150 higher than the median for the West North Central section which adjoins Indiana. Likewise, our median was higher than for Vassar unmarried alumnae. With the differences in employment opportunities and living costs from one geographical area to another, it is difficult to choose the group which will give the most significant comparison with Indiana University.⁷

By Occupation. The best paid occupations of these Indiana University women immediately upon graduation were teaching and nursing (Table 25). The median first salaries in both occupations were \$1,167. Social work and other professions also paid above \$1,140 for beginners. In contrast, in the clerical occupations the Indiana women started with

⁷ Indiana University alumnae probably suffer in comparison with the alumnae of the *Time* and Vassar studies in that the Indiana data include the "last salary" as well as the "present salary," and therefore (1) include many alumnae who worked only one or two years, and never reached the higher salary brackets, and (2) alumnae whose last salaries were relatively low because they were paid in the latter years of the depression.

Table 24. Median Salaries of Alumnae, from Indiana University and Other Institutions.

	<i>Median Salary</i>
1. <i>Time</i> 1940—Under 30 years	
East North Central Region	\$1,450
2. Vassar 1927-1937	
Total, married and single	1,400
3. <i>Time</i> —Under 30 years	
Total	1,380
4. Indiana 1933-1941	
Total	1,360
5. Vassar 1927-1937	
Single Women	1,300
6. <i>Time</i> —Under 30 years	
West North Central Region	1,210

median salaries between \$821 for the sales group and \$959 for secretarial work. The managerial and the skilled, semiskilled, and unskilled occupations, i.e., the non-professional and non-clerical fields, typically paid as little as \$875.

According to the median salary in the last position, the best paid occupations eventually are nursing, social work, and other professions such as medicine, writing, science, and library work, but excluding teaching. These median salaries varied between \$1,417 and \$1,476. The lower salaries of the elementary teachers brought the median for teachers down to \$1,367. The present salary for the clerical group was \$1,222 or \$300 above their first salary in contrast to an increase of only \$225 for the professional fields. The secretaries increased to a median of \$1,274, the other clerks to \$1,144, but the sales group remained below \$1,000. It is of interest to observe that the median last salary for the 18 women in the non-professional and non-clerical fields was as high as \$1,361, an increase of \$486 over the first salary.

Table 25. Median Salaries of Alumnae in First and Present (or Last) Positions, by Occupation.

Occupation	First Salary Median	Last Salary Med.an	Increase in Salary Median
All Professional	\$1,165	\$1,390	\$225
All Teachers	1,167	1,367	200
High School	1,209	1,378	169
Elementary	1,031	1,293	262
Others	1,154	1,430	276
Nursing	1,167	1,476	309
Social Work	1,149	1,417	268
Other Professional	1,158	1,476	318
All Clerical	921	1,222	301
Sales	821	933	112
Secretarial	959	1,274	315
Other Clerks	892	1,144	252
Non-Professional and Non-Clerical....	875	1,361	486

The Greenleaf study also found that "nursing and teaching are the best paid occupations for a woman during her first year out of college."⁸ This study reported that after eight years the college alumnae who remain at work find the larger salaries in research, teaching, and business. The Indiana study, however, indicates that professions such as research, nursing, and social work, but excluding teaching, eventually are the best paid, and that the clerical fields rank low in eventual salary.

By College. The alumnae of the Schools of Education and Music tended to receive the highest first salaries; both medians were above \$1,200 (Table 26). The median first salaries received by the non-graduates was conspicuously low; in fact, it fell below \$900. The graduates of the School of Education, who composed less than one-half of the total group of teachers, received the highest last salaries with the median above \$1,500. This is in sharp contrast to the median for the larger group of teachers, which includes many graduates of the College of Arts and Sciences and even some non-graduates in the field of elementary education. The differences in the median last salaries for the Schools of Nursing, Business, Music, and the College of Arts and Sciences were slight. The non-graduates still were low with a median of \$1,171 (Table 28).

By Major Field. For the major fields, the highest first salaries were received by the graduates in the more professional areas of physical education, home economics, and nursing, with median salaries between \$1,184 and \$1,200 (Table 26). In contrast, the graduates in social sciences, English, and business typically received less than \$1,080 for their first positions. Three major groups, nursing, physical education, and physical sciences, eventually earned median salaries of \$1,400 or above. At the same time, those students who had taken a major in English, foreign languages, and fine arts and music typically remained at \$1,300 or below, even in their last positions.

By Year of Graduation. The year of graduation seems to have had no consistent effect on the size of the first salary (Table 26). The last two classes (1940 and 1941) have received slightly higher beginning salaries than the other classes, and the classes of 1935 and 1936 dropped below the other classes with a median first salary of less than \$1,100. For all nine classes, the medians varied only from \$1,083 to \$1,156.

In the last salary, however, the number of years out of college is an important factor. The four classes which have been out five or more years have reached median salaries of \$1,462 to \$1,516. None of the latter five classes have medians above \$1,352 and the lowest is \$1,307. In terms of increases in salary from the first to the last positions, a contrast also can be observed between the classes, 1937-41, and the classes, 1933-36. The five recent classes have shown increases in salary of \$153 to \$227 a year, while the median salaries of the other four classes which cover a longer period of working time have

⁸ Greenleaf, Walter, J., *op. cit.* Page 71.

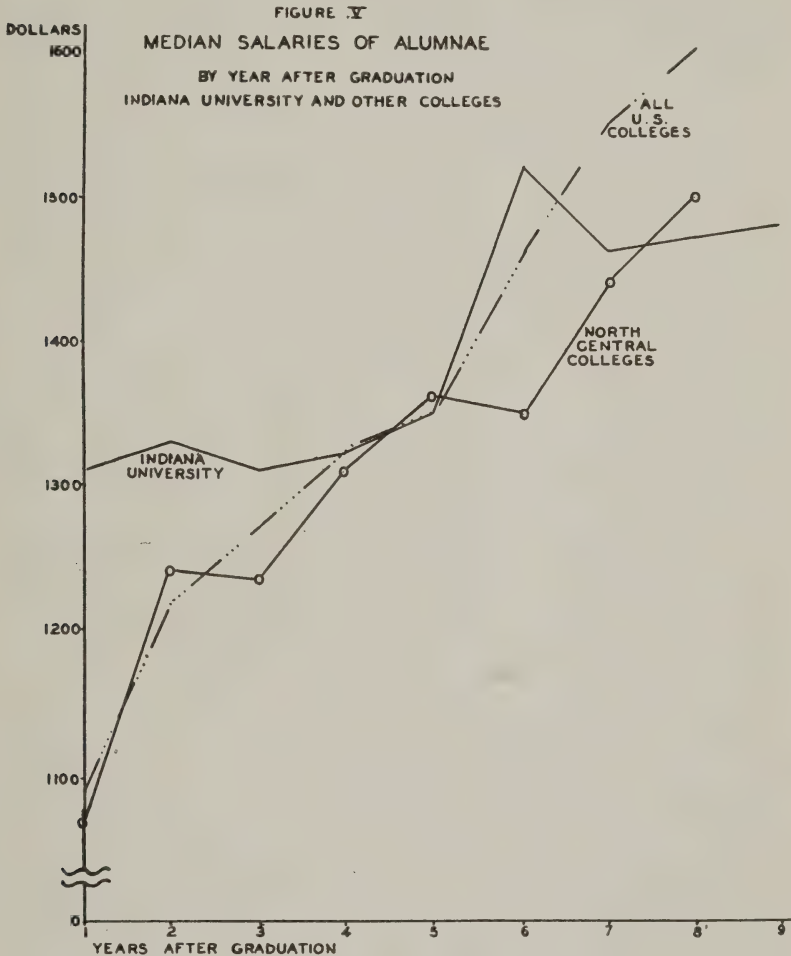
Table 26. Median Salaries of Alumnae in First and Present (or Last) Positions, by College, by Undergraduate Major Field, and by Year of Graduation.

	First Salary Median	Last Salary Median	Increase in Salary Median
College			
Arts and Sciences	\$1,104	\$1,307	\$203
Business	1,068	1,338	270
Education	1,204	1,509	305
Music	1,216	1,302	86
Nursing	1,113	1,350	237
Non-Graduates	858	1,171	313
Total Graduates	1,131	1,360	229
Major Field			
English	1,070	1,300	230
Foreign Languages	1,110	1,300	190
Physical Sciences	1,141	1,400	259
Biological Sciences	1,130	1,370	240
Social Sciences	1,062	1,326	264
Home Economics	1,192	1,389	197
Physical Education	1,200	1,409	209
Education	1,091	1,315	224
Business	1,072	1,308	236
Nursing	1,184	1,420	236
Fine Arts and Music	1,174	1,283	109
Others	938	1,250	312
Year of Graduation			
1941	1,155	1,308	153
1940	1,156	1,332	176
1939	1,102	1,307	205
1938	1,143	1,320	177
1937	1,125	1,352	227
1936	1,092	1,516	424
1935	1,083	1,462	379
1934	1,118	1,470	352
1933	1,111	1,477	366

increased as much as \$352 to \$424 a year. Nevertheless, there was not a consistent increase in salary with years out of college. For example, the highest median salary for the nine classes was for 1936 rather than 1933, and the class of 1940 has achieved a higher salary than the 1939 and 1938 classes.

Likewise, in the Greenleaf study the trend was toward an increase in salary with an increase in the number of years out of college, but it was not entirely consistent. It has been possible to compare the salary of Indiana alumnae with the alumnae of the North Central colleges

according to the number of years out of college. The Indiana median salary was higher than the corresponding one for the other colleges for all but two of the first eight years out of college. The largest difference was in the salary of the most recent class with the Indiana median almost \$250 higher.



The difference in the period of graduation must be recognized as a possible factor contributing to the higher salaries of the Indiana alumnae. Three or more classes in the other study graduated in the depression period while no more than two of the Indiana classes faced serious depression conditions. Nevertheless, the Greenleaf study was made in 1936 when conditions had improved.

The comparisons with the *Time*, Vassar, and Greenleaf studies all indicate that the salaries of Indiana University alumnae are in line with the salary ranges for other institutions. The differences in salaries of the alumnae of this university according to their major fields, colleges, and eventual occupations seem much more significant and interesting than the comparison with the other colleges, especially in view of the fact that the great complexity of factors which affect salaries makes it extremely difficult to find similar groups for comparisons from one college to another.

EDUCATIONAL HISTORY

More than one-half, i.e., 54 per cent, of the Indiana University alumnae in this study have reported some formal study since leaving college. A smaller group, 31 per cent, have pursued graduate courses toward an advanced degree, and 20 per cent have enrolled in the university extension classes either at the undergraduate or graduate level, while 10 per cent have had business courses such as in typing and shorthand. The median length of post-college study has been nine months. In other words, the typical alumna who reported formal study beyond college has continued her education and training for a period of one academic year. Of these alumnae who engaged in post-college study, 30 per cent obtained a master's degree, 1 per cent a Ph.D., and 1 per cent an M.D. degree. However, for the total alumnae group, 16 per cent obtained a master's degree, 1 per cent a Ph.D., and 1 per cent an M.D. degree (Table 27).

Greenleaf reported a higher percentage of the alumnae in his study who engaged in graduate study but a smaller percentage who received advanced degrees. In fact, 46.5 per cent of the North Central alumnae undertook graduate study in contrast to 31 per cent for Indiana. Nevertheless, only 11 per cent of the alumnae in the Greenleaf study obtained a master's degree in comparison to 16 per cent of the Indiana alumnae. In other words, the alumnae of Indiana University seem to exceed the alumnae in the other study in the extent of graduate study which is carried through to an advanced degree.

More than one-half of these alumnae have continued their study at Indiana University while another 10 per cent have attended business colleges (Table 28). Other colleges and universities which as many as ten or more of the alumnae have attended were: University of Chicago, Indiana State Teachers College, Columbia University, Butler University, Ball State Teachers College, Northwestern University, University of Illinois, and Central Normal College of Indianapolis. With the exception of Columbia University, all of these more popular institutions are located either within the state or in the neighboring state of Illinois. However, more than eighty different colleges and universities were listed, and many were outside of the Middle Western section.

Table 27. Percentage of Alumnae Who Have Obtained Advanced Degrees, by College and by Year of Graduation.

College	Number	Percentage		
		A.M.	Ph.D.	M.D.
Arts and Sciences	802	12	<1	1
Business	140	9	0	0
Education	367	32	1	0
Music	47	13	1	0
Total—Graduates	1,487	16	1	1
Total who engaged in post-college study	801	30	1	1
Year of Graduation				
1936-41	1,179	14	<1	..
1933-36	266	20	1	..

Table 28. Number and Percentage of 675 Indiana Alumnae with Post-College Study at Specified Schools and Universities.

<i>School</i>	<i>Number</i>	<i>Percentage</i>
Indiana University	388	58
Business Colleges	70	10
University of Chicago	29	4
Indiana State Teachers College	23	3
Columbia University	19	3
Butler University	18	3
Ball State Teachers College	13	2
Northwestern College	13	2
University of Illinois	12	2
Central Normal College	11	2

The eight most common major fields of advanced study were, in order of frequency: education, 23 per cent; social sciences, 12 per cent; business, 11 per cent; English, 9 per cent; library science, 8 per cent; foreign languages, biological sciences, and nursing, 5 per cent each (Table 30). Five of these fields, education, social sciences, English, languages, and biological sciences, were also the most popular graduate majors in the Greenleaf study. Greenleaf also reported home economics, physical sciences, and fine arts as common graduate majors.

EXTENT OF POST-COLLEGE STUDY. The study shows interesting variations in the extent of post-college study, by college, major, and year of graduation.

By College. For the four undergraduate colleges at Indiana University, the College of Arts and Sciences was high with almost 60 per cent of its graduates continuing formal study beyond graduation in

comparison to 55 and 54 per cent of the graduates of the Schools of Music and Education, respectively, and only 30 per cent of the School of Business. Likewise, of the smaller group who pursued graduate study toward a degree, there are fewer School of Business alumnae. Indeed, only 18 per cent of the alumnae of this school entered graduate school in comparison to 40 per cent of the School of Education graduates and 32 per cent of the College of Arts and Sciences alumnae. The School of Education exceeded the other two colleges in extension study as well (Table 29).

The higher percentages of School of Education alumnae who pursued graduate and extension study were reflected in the correspondingly higher percentage who received the master's degree in comparison to the other three colleges (Table 27). Almost one-third of them obtained this advanced degree while less than 15 per cent of the other alumnae earned the same degree. It should be emphasized that a master's degree is almost essential to advancement in the teaching profession. The greater tendency for School of Education alumnae to engage in graduate study certainly reflects this professional demand.

However, the alumnae of the College of Arts and Sciences took business courses more frequently than other alumnae (Table 29). This difference also is to be expected since the College of Arts and Sciences is less professional and vocational than the other three colleges. Consequently, its graduates would feel the need more frequently to obtain the secretarial skills as an entree to their fields of interest.

By Major. The extent of post-college study also varied for undergraduate major groups (Table 29). The majors in order of percentage who continued formal study beyond college were: biological sciences (including psychology), foreign languages, physical sciences, fine arts and music, English, social sciences, education, nursing, physical education, home economics, and business. The actual percentages varied from 69 to 31.

The groups which ranked high in the percentage who took business courses were the less vocational and more cultural undergraduate majors such as physical and biological sciences, social sciences, foreign languages, English, fine arts, and music. On the other hand, few alumnae with the more vocational or specialized undergraduate majors such as nursing, physical education, and home economics took business courses. These latter majors had not needed secretarial skills to progress vocationally.

By Year of Graduation. The extent of post-college study tends to increase with the number of years since graduation (Table 29). Such a trend is to be expected. From 56 to 62 per cent of the classes from 1938 to 1933 have engaged in advanced study in comparison to less than 45 per cent of the two more recent classes. The same trend is evident in the percentages who have done graduate and extension study. In fact, 20 per cent of the graduates before 1936 have obtained the master's degree while only 14 per cent of the later graduates have received this degree. However, the relationship of year of graduation to the extent of business study is less clear.

Table 29. Percentage of Alumnae With Specified Types of Post-College Study, by College, by Undergraduate Major Field, and by Year of Graduation.

College	Types of Post-College Study				
	Graduate	Extension	Business	Other	Total*
Arts and Sciences	32	15	15	16	59
Business	18	13	4	6	29
Education	40	31	6	12	54
Music	30	19	0	21	55
Total—Graduates	31	20	10	14	54
Major Field					
Biological Science	43	23	12	12	69
Foreign Language	33	16	14	22	66
Physical Science	41	20	19	17	64
Fine Arts and Music	23	16	13	27	59
English	29	20	13	16	58
Social Science ...	27	16	16	15	58
Education	29	26	8	15	53
Nursing	11	31	2	14	47
Physical Education	25	20	3	14	42
Home Economics.	15	9	4	13	33
Business	16	11	7	8	31
Year of Graduation					
1941	22	15	8	8	39
1940	25	16	9	13	44
1939	29	19	10	13	54
1938	35	20	11	18	61
1937	32	17	13	14	56
1936	36	29	7	13	60
1935	34	19	5	17	58
1934	33	23	18	22	62
1933	45	21	12	18	69

* Duplicates omitted.

MAJOR FIELD OF ADVANCED STUDY. The graduates of the School of Education have tended to carry on post-college study in the field of education, and likewise the graduates of the Schools of Business and Music have continued study in their own fields (Table 30). However, the alumnae of the College of Arts and Sciences have studied in a wide variety of major fields, with from 10 to 15 per cent of these graduates having majors in each of the following areas: social sciences including social work, English, business, education, and library science.

Table 30. Percentage of Alumnae With Post-College Study in Specified Fields, by College.

Major Field of Advanced Study	College				
	Arts and Sciences	Business	Education	Music	All graduates
1. Education	10	21	58	9	23
2. Social Sciences ..	15	0	6	0	12
3. Business	12	47	5	0	11
4. English	12	8	7	0	9
5. Library Science .	12	0	2	5	8
6. Foreign Languages	6	5	2	0	5
7. Biological Sciences	6	0	2	0	5
8. Nursing	3	0	1	0	5
9. Music	1	0	1	59	3
10. Physical Sciences	3	0	1	0	2
11. Fine Arts	2	3	2	18	2
12. Home Economics.	2	0	2	5	2
13. Physical Education	1	3	7	5	2
Others	15	13	4	0	11

The major field of advanced study shows a definite relationship to the undergraduate major (Table 31). The percentage who continued study after college in the same major grouping varied from 22 to 72 for the different fields, but this percentage was usually higher than for any other field. The alumnae with undergraduate majors in nursing, education, music, fine arts, and business ranked particularly high in the percentage who continue to concentrate in the same field in post-college study. The only fields which consistently showed a high percentage of advanced study outside of the undergraduate major field were education and business. It was noted earlier that it was the majors in the less vocational areas of physical sciences, social sciences, fine arts, English, foreign languages, and biological science who felt the need to take business courses after college. Library science, also, was popular as a field of advanced study for the alumnae with undergraduate majors in foreign languages, English, and social sciences.

No clear relationships between year of graduation and the major field of advanced study could be observed.

EVALUATION OF UNDERGRADUATE COURSES AND CURRICULA

It is difficult for any individual to evaluate his education, and especially difficult to do so in quantitative terms, on paper, without a personal interview and without the opportunity to express one's self at length and with proper qualifications. Only a very rough approxi-

Table 31. Percentage of Alumnae With Post-College Study in Selected Fields, by Undergraduate Major.

Undergraduate Major	Same Field	Selected Fields		
		Education	Business	Library Science
English	28	17	12	16
Foreign Languages	25	14	10	21
Physical Sciences	22	18	20	0
Biological Sciences	34	6	10	2
Social Sciences	32	13	17	12
Fine Arts	55	9	18	9
Music	58	4	8	4
Home Economics	28	8	4	0
Physical Education	33	33	8	4
Education	59	59	5	3
Business	47	31	47	0
Nursing	72	8	0	0

imation could be elicited from the alumnae, and the means provided doubtless seemed inadequate to them. Many alumnae sent accompanying letters in which more detailed criticisms were set forth.

They were asked to express either satisfaction or dissatisfaction in each of four areas of the University offerings. The four areas were: I, Cultural (art, music, drama, literature, languages); II, Vocational (education, business, nursing, etc.); III, Citizenship (government, sociology, economics); and IV, Homemaking (clothing, foods, health, home decoration, child psychology, etc.) The five possible evaluations were stated in the following terms:

1. I took courses in this area and feel satisfied with my selection.
2. I took courses in this area but feel that my selection was inadequate.
3. I took courses in this area and feel that there was an overemphasis on this work in my program.
4. I took no work in this area but feel the lack.
5. I took no work in this area but do not feel the lack.

Dissatisfaction could take the form of statements 2 or 4, and satisfaction, the form of either 1 or 5. Although overemphasis might be thought of as a form of dissatisfaction, it is given separate treatment in our results, and the term "dissatisfaction" is reserved for statements 2 and 4.

In general, the proportion of unfavorable comments was 33.5 per cent for all schools and all areas. In a study of this kind, it is easy to overemphasize the dissatisfactions because of their importance in pointing out inadequacies in the curricula. Although the dissatisfactions will be analyzed therefore in some detail, the most important fact is, after all, the very large proportion of alumnae who have found their University courses more than adequate for their subsequent needs. On the average, two-thirds of the graduates cannot find any criticism,

although the form of the question encourages them to do so, and makes it very easy for them to record even the smallest misgivings. This high degree of satisfaction, in view of the definite encouragement to criticize, is very significant.

Most dissatisfaction was expressed in the cultural areas, 38 per cent, and least in the vocational area, 24 per cent (Table 32). Least dissatisfaction was expressed by the nurses (18 per cent), and most by the alumnae of the College of Arts and Sciences (36.5). Both of these proportions show significant differences⁹ when compared with all other colleges exclusive of themselves.

In the various colleges, the dissatisfaction occurs within different areas. In the College of Arts and Sciences, for example, the dissatisfaction is most significant in the area of vocational training. Twenty-two per cent who had taken vocational courses found them unsatisfactory, and 15 per cent report that they had taken no such courses and later felt the lack. This makes a total of 35 per cent of College of Arts and Sciences students dissatisfied in this area, as against 24 per cent of all students. All these differences are statistically significant.

On the other hand, Schools of Business and Education alumnae and nurses offer less complaint than the average in regard to vocational training, and the differences are statistically significant. Music alumnae and non-graduates show no differences from the general average in vocational dissatisfaction.

Education for citizenship was described in the questionnaire as including government, history, economics, and sociology, and it is therefore not surprising to find some of the more favorable attitudes in the School of Business, where such courses are required, although there was little deviation from the general average in any one school. The nurses also are an even more satisfied group as to citizenship, possibly because of the large number who study social problems and welfare work.

In the homemaking area both the School of Business alumnae and the non-graduate group make a strong protest. Only the School of Business, however, shows a difference that is statistically significant: 48 per cent in contrast to the average of 36 per cent. Most of the complaints are to the effect that the alumnae took no courses and now feel the lack.

School of Education graduates and especially School of Business graduates also make a strong protest against their lack of cultural background. There is a difference in that business students tend to be more dissatisfied with the cultural courses they did take while education students and the nurses deplore their lack of any courses. Although they are more satisfied with their vocational training than any other group, School of Business alumnae have expressed a dissatisfaction on two counts which are of importance in the education of women, cultural background and homemaking.

There is very little complaint of overemphasis on any part of the curriculum (Table 33). The proportions are negligible except perhaps

⁹ Difference statistically significant, i.e., the ratio of the difference to the sigma of the difference is greater than 3.

in the vocational area, where there is an average of 11 per cent, with the greatest dissatisfaction in the Schools of Music (21 per cent) and of Education (18 per cent). The overemphasis is also claimed by those who did their major work in education (20 per cent), with social science majors next highest, at 17 per cent (Table 34).

Eight per cent of the foreign language majors claim an overemphasis likewise in the cultural area. This is to be sure a small proportion, but it is of interest to note that this is the only group making a rather strong protest of overemphasis in this area.

Many different kinds of tabulations of the data were made in an attempt to find some trend of opinion which would reflect the passage of time. But the fluctuations from 1933 to 1941 show little or no continuity nor consistency. There is no tendency to feel lack, as the alumnae grow older, in citizenship training or in cultural background, or to feel that the courses taken were inadequate. There is a slight tendency to protest the lack of homemaking courses: the average of the three youngest classes is 16 per cent; of the next three, 17 per cent; and the three oldest, 21 per cent. There is a similar, slight tendency to regret not having taken certain courses in any one of the four areas—10 per cent for the youngest, 14 per cent for the middle, and 16 per cent for the oldest classes.

Table 32. Percentage of Alumnae Who Expressed Dissatisfaction (a) "Selection of Courses Inadequate," (b) "Took No Work and Feel the Lack," by College and by Area.

Area	College											
	Arts			Business			Education			Music		
	Total	(a)	(b)	t	(a)	(b)	t	(a)	(b)	t	(a)	(b)
Cultural ...	33	30	3*	56*	45*	11	47*	34	13*	4*	4*	0
Vocational .	35*	22*	13*	9*	8*	1*	12*	10*	2*	21	15	6
Citizenship	37	22	15	29	26	3*	38	20	18	39	13	26
Home-making. .	39	11	28	48*	9	39*	31	15	16*	37	9	28
All Areas ..	36.5	21.8	15	34.7	21.6	13	33	20.7	12.4	25	10	15

	College								
	Non-Graduates			Nurses			Total		
	t	(a)	(b)	t	(a)	(b)	t	(a)	(b)
Cultural	35	26	9	35	7*	28*	37.8	24.3	7.9
Vocational ..	23	16	7	8*	7*	1*	24.0	16.1	7.8
Citizenship ..	34	22	12	20*	8*	12	36.1	21.6	14.6
Homemaking	44	9	35	10	3	7	36.1	10.7	25.4
All Areas ...	34.2	18.2	15.9	18.2	6.3	12	33.5	19.6	14

* Difference statistically significant.

Table 33. Percentage of Alumnae Who Claimed an Overemphasis in Parts of Their Curricula, by College and by Area.

Area	College						Total
	Arts	Business	Education	Music	Non-Graduates	Nurses	
Cultural	4	2	2	2	4	1	3
Vocational	9	8	18	21	8	2	11
Citizenship	3	3	1	0	2	3	2
Home-making	0	0	0	0	1	1	0
All Areas	4.1	2.8	5.5	5.8	3.9	1.8	4.1

Table 34. Percentage of Alumnae Who Claimed Overemphasis, by Undergraduate Major Field and by Area.

Major Field	Area			
	Cultural	Vocational	Citizenship	Homemaking
English, Journalism, Speech	5	11	3	0
Foreign Language	8	12	0	0
Physical Sciences	4	11	1	0
Biological Sciences	5	5	4	0
Social Sciences	4	13	3	0
Home Economics	1	4	1	3
Physical Education	0	5	2	0
Education	1	20	2	0
Business	1	8	3	0
Nurses	0	3	3	3

SUMMARY OF RESULTS

RETURNS. Women graduates from the classes of 1933 to 1941, to the number of 2,675, were sent questionnaires; 1,487, or 56 per cent, replied. One thousand non-graduating students from the same classes were sent questionnaires; 165, or 16 per cent, replied.

MAJOR SUBJECTS. The fields in which Indiana shows a higher proportion of majors are mainly those in which there is a separate

school or professional training beyond that given in the average college, i.e., English, including speech and journalism, physical education, business, and nursing.

PERSONAL HISTORY. Geography. Approximately 95.5 per cent of Indiana University students live in the Middle West and 87 per cent of the alumnae are still residents of the Middle West. Eighty-nine per cent of the students come from the state of Indiana and 70 per cent of the alumnae continue to live within the state. Education, nursing, and music tend to keep alumnae close home; business, science, and physical education send them farther afield.

Marriage. The rate is about 10 percentage points higher for alumnae of eight most recent classes of Indiana University than for other colleges. The proportion of married women is higher among non-graduates (62.4 per cent), next in the School of Business (54.3 per cent), nurses (53.5 per cent), College of Arts and Sciences (32.9 per cent), and lowest are the School of Music (34 per cent) and the School of Education (32.1 per cent). Departments with highest per cent of married alumnae are home economics and foreign language (56 per cent each), sciences (54 per cent), English and business (50 per cent each). Majors in education (35 per cent) and physical education (34 per cent) show the lowest marriage rate. Eighty-two per cent of husbands are college men and 55.5 per cent were educated within the state of Indiana.

The number of alumnae with children is lower for Indiana University than for other institutions. Only 31 per cent of alumnae of last eight classes are rearing children.

VOCATIONAL HISTORY. First Positions. Eighty-seven per cent of the alumnae desired a position at the end of the college careers and two-thirds of these found positions within three months. The most advantageous sources of assistance in securing employment according to the ratings of the alumnae were: personal contacts or visit to the employer, the University placement bureaus, friends and relatives.

Number of Positions Held. Ninety-one per cent of Indiana alumnae have been employed at some time following graduation in comparison to 67 per cent of Vassar alumnae. However, one-half of the alumnae have held no more than one position. For the earlier classes (1933-38), the median increased only to two positions.

Extent of Unemployment. Only 16 per cent of the women in this study have been unemployed at any time when they desired a position. A majority of these had been unemployed only one time, and the median length of the period was five months. This is a favorable report in comparison with other studies. The percentage who have been unemployed was highest for the graduates of the College of Arts and Sciences and the School of Music. The percentage unemployed was less for vocational majors such as nursing, home economics, physical education, education, and business. Of the nine graduating classes in

this study, the class of 1933 ranked unusually high with one-third of these graduates unemployed at least one time.

Present Employment Status. Of this alumnae group, 65 per cent are now permanently or temporarily employed, 31 per cent are housewives, and 3 per cent students. Only 6 per cent are now unemployed and desire employment. These percentages are typical of other studies except that the percentages of housewives seem significantly high. In fact the alumnae of Indiana University seem to withdraw more rapidly from the working world than the alumnae as reported in other studies. From the class of 1941 to 1933 there was a consistent decline in the percentage now employed and a rise in the percentage of housewives.

Percentages of alumnae now employed are as follows: by colleges, 84 per cent, School of Education; 75 per cent, School of Music; 57 per cent, School of Business; and 57 per cent, College of Arts and Sciences. The more vocational majors such as education, physical education, nursing show a larger proportion now employed than the typical liberal arts majors.

Relationship of Occupation to Major Course in College. Two-thirds of the first positions of Indiana alumnae were in a field related to the undergraduate major, in contrast to 57 per cent for Greenleaf study. For the colleges, the percentages finding first positions related to major were: School of Education, 77; School for Nurses, 71; School of Music, 68; School of Business, 53; College of Arts and Sciences, 42. Likewise the relationship of first positions to major was closer for the more specialized and vocational majors, such as nursing, education, business, physical education, and home economics, than for the more cultural subjects. The class of 1933, which graduated in the depression, showed least relationship between the first job and the major field.

The present occupation was less closely related to undergraduate major than first positions, a fact which is probably due to the increase in the proportion of housewives.

Majors in English (32 per cent) and biological sciences (33 per cent) show much dissatisfaction with present occupations, while majors in nursing (8 per cent) express little discontent.

Occupations of Indiana University Women. Positions of alumnae in this study were classified thus:

- 74 per cent professional—49 per cent education, 11 per cent nursing, 6 per cent social workers, 2 per cent home economics
- 25 per cent clerical—14 per cent secretarial, 9 per cent other clerks, 2 per cent sales
- 1 per cent proprietor and managerial
- 1 per cent skilled, semi-, unskilled.

Graduates of Schools of Nursing, Education, and Business tended to enter their respective fields and School of Music graduates, educational work. College of Arts and Sciences graduates entered a wide variety of fields: 41 per cent teaching, 31 per cent clerical, 9 per cent social work, also writing, home economics, nursing, etc. Similar differences are noted for the cultural versus the more vocational major fields.

The class of 1933 showed unusual variation, as follows: At graduation relatively few entered teaching while a high percentage entered clerical fields and social work, but for the last positions there was an increase in professions and a decrease in clerical workers.

In comparison to other studies there was no difference in percentage of Indiana alumnae who find professional employment, but percentages of teachers and of nurses seemed high.

Salaries. The Indiana median of \$1,360 shown in Table 35 compares favorably with the following five medians reported in two other studies: \$1,450; \$1,400; \$1,380; \$1,300; and \$1,210.

Table 35. Salaries of Alumnae in First and Present (or Last) Positions.

	First Salary	Last Salary
Median	\$1,131	\$1,360
Q1	840	1,122
Q3	1,349	1,693

The median first salaries according to occupations were: teaching \$1,167, nursing \$1,167, social work \$1,149, other professional \$1,158, secretarial \$959, other clerks \$892, and sales \$821.

The median last salaries were: nursing \$1,476, social work \$1,417, teaching \$1,367, other professional \$1,476, non-professional and non-clerical \$1,361, secretarial, \$1,274, other clerks \$1,144, and sales \$933.

The majors in nursing and physical education receive highest first and last salaries while the English majors ranked low for both salaries.

The trend toward increase in median salary with number of years out of college is noted in both this and Greenleaf's studies although the trend is not absolutely continuous.

EDUCATIONAL HISTORY. Fifty-four per cent of alumnae have engaged in formal study since graduation: 31 per cent (46.5 per cent in Greenleaf study) graduate study toward an advanced degree, 20 per cent extension classes at either the graduate or undergraduate level, and 10 per cent business and other courses. The median length of study was nine months. Sixteen per cent received the master's degree in comparison to 11 per cent in the Greenleaf study, 1 per cent the Ph.D., and 1 per cent the M.D. degree. Fifty-eight per cent continued their study at Indiana University, and 21 per cent attended other institutions in Indiana and Illinois. In all, more than eighty different universities attracted these Indiana graduates.

The five most popular fields of advanced study were: education, social sciences, business, English, and library science. Alumnae tend to continue graduate study in their undergraduate major field.

The School of Education ranked highest and the School of Business lowest in percentages of alumnae who did graduate study, who attended extension classes, and who received the master's degree. This difference reflects demands of the educational versus the business world. Alumnae of the College of Arts and Sciences took business courses more frequently than other alumnae. Likewise, the majors

in physical science, social science, foreign languages, English, fine arts, and music took business courses more frequently than the more vocational and specialized majors. Majors in biological sciences, foreign languages, and physical sciences show high percentages both in formal study and master's degrees.

Graduates of the Schools of Education, Business, and Music tended to carry on advanced study in their respective fields while graduates of the College of Arts and Sciences studied in a wide variety of fields: social sciences (including social work), business, English, library science, and education. Library science was a popular field of study for majors in foreign languages, English, and social science.

EVALUATION OF CURRICULA. Although the graduates were encouraged to criticize their college education by the form of the question, and although the analysis of areas and schools made it easy to record even small details, only a small proportion of alumnae registered disapproval, and the high degree of satisfaction is very significant. In general, two-thirds of the graduates are pleased with their curricula, and in some areas, notably the vocational preparation, the general satisfaction is especially high.

Table 36 gives the proportion of dissatisfaction in all colleges.

Table 36. Percentage of Alumnae Who Expressed Dissatisfaction, by College and by Area.

Areas	Arts	Business	Education	Music	Non-Graduates	Nurses	Total
Cultural	33	56*	47*	4*	35	35	37.8
Vocational	35*	9*	12*	20	23	8*	24.0
Citizen-ship ..	37	29	38	39	34	20*	36.1
Home-making	39	48*	31	37	44	10	36.0
Total ...	36.5	34.7	33	25	34.2	18.2	33.5
Number of Cases Studied	802	140	367	47	165	99	1,620

* Difference statistically significant, i.e., the ratio of the difference to the sigma of the difference is greater than 3.

INTERPRETATIONS AND CONCLUSIONS

The discovery of such facts as are revealed by this survey inevitably brings with it the temptation to speculate, to interpret, and even to recommend. Especially to those who are constantly associated with the problems of women students, and of women graduates struggling in the economic and professional world, the opportunity becomes irresistible. On the other hand, to administrators who deal with the problem of adjusting present educational machinery and theory to the always inadequately predicted future needs, the recommendations may seem more stimulating than feasible.

In the education of women, Indiana University is devoting about 90 per cent of its efforts to students who are living within the state and who will continue to live in the same area. It has both a duty and an opportunity to influence and to mold the culture, the political and social mores of the state. Since the state has few metropolitan centers, this role may become the more significant as the University's prestige as a cultural center continues to grow.

The study shows that women graduates of the College of Arts and Sciences feel that the curricula of this college should recognize and provide for the vocational needs of its students. Unemployment is high for this college, especially in the non-vocational majors. Dissatisfaction with present employment is highest among the graduates of this college, especially in the more cultural majors, such as English, and in the sciences. Their salaries, both first and last, are below the median salary for all graduates. These graduates, especially those with the more cultural majors, are the ones who have found it necessary to take business courses after college. Fewer graduates from the College of Arts and Sciences than from any other school find their jobs through any University placement agency, and only 42 per cent, as contrasted with 67 per cent from other schools, find a job that is related to their field of major study. These facts may partially account for the fact that the College of Arts and Sciences shows a decline in the proportion of its graduates, from 57 per cent to 38 per cent in the past ten years.

Graduates of the School of Business are of the opinion that this school should include in its curricula more courses along the lines of general culture and homemaking. Although few graduates of this school find it necessary to continue in post-college study, the fields of sales and secretarial work are so ill paid (\$821 and \$959 median first salary) that one questions whether the vocational emphasis and the elaborate training are justified. It might seem that in the matter of vocational training the business curriculum is geared too high and in cultural training too low for the best interests of women students.

Only in the Schools of Music and Education is there a significantly large group who speak of overemphasis on vocational training. It may be either that there is too much time given to method, or that the instruction in methodology is not well done.

In counselling students, advisers should keep in mind that the best paid professions are teaching, nursing, and social work, and the lowest paid are the sales, secretarial, and clerical groups. Again, advisers must never lose sight of the fact that except for completed long-term professional training, such as teaching, nursing, social work, journalism, laboratory techniques, etc., the entree for women into their careers is through typing. Even for those who have excellent professional training and who will eventually hold executive or other positions in the business world requiring special talents and skills, and certainly for all those who do not have this special training, stenographic skill is still the essential entering wedge.

Until women have more freedom to use training in secretarial skills as elective courses, to satisfy group requirements or requirements

for the field of minor interest in all colleges and schools, we may question whether the University is meeting the most important needs of its women students. We find the courage to raise this question because of the fact that some of our best students, and certainly girls from our higher socio-economic levels, are entering the business world. Opportunities for women in business were increasing even before World War II and the emergency will make the business and professional woman even more acceptable. Economic and social trends indicate also a more general acceptance of the married women in the business and professional world. For the education of young women, these general trends have two meanings: (1) Business or secretarial skills will become a part of the career training for an increasingly large number of women, and (2) understanding the world of economics, labor, insurance, trade, consumption, etc., will become an indispensable part of her general cultural equipment. It will become increasingly difficult for the University to refuse to recognize the worth and dignity of secretarial skills as equal to other professional training, such as teaching methods, techniques of science, statistics, language skills, etc.

The marriage rate is unusually high in comparison with rates reported from similar studies in other schools, and the period of employment is very short, for graduates as well as for non-graduates. It must be remembered also that most single women, as soon as they can afford it, furnish their own apartment or house, and face most of the problems of maintaining a typical home. Many single women build their own new homes. From the point of view of the student as future citizen, it would be more profitable for her to spend a little more time on her prospective role as wife, mother, and citizen than on her role as teacher or secretary. The professional or business world of the classroom or the office is probably better regulated and easier to comprehend and master than the social and economic and political world, with all its bewildering twentieth-century complexity.

The professional schools, such as Education, Music, Business, Nursing, design their curricula to meet the future needs of their graduates as they go out into the world to practice their professions. In most professional fields, those actually practicing the profession have established standards which clearly define the profession and prescribe the necessary training. These standards are further crystallized in legislative acts which allow no deviation. On the other hand, those persons who have acquired and are now enjoying the pleasures of a cultural education are not necessarily linked together in the practice of their art. They do not pay dues to a national association or maintain a permanent committee on standards.

It is therefore all too easy for University administrators in planning a cultural curriculum to forget the actual future needs of the students whom they are at present attempting to serve. It is easy to forget that 75 per cent of Indiana alumnae will be married eight years after graduation, and that they hold, on the average, only one job and that one job for a very short period of time. Education which prepares for a successful life as citizen and housewife is most difficult both to define and to achieve.

As they look back over their University courses, the women graduates feel that there was not sufficient emphasis on their future roles as homemakers. To many undergraduate women, dignified and gracious home life is one of the least attractive goals. The concept of homemaking as a science or of living as an art is equally foreign to them, and it would be as difficult to persuade the typical undergraduate woman of the importance of homemaking courses as to persuade the typical college professor of the dignity and significance of such material. Undoubtedly the college undergraduate will look with disapproval on courses prescribed for him, whether they are Latin, mathematics, chemistry, or nutrition.

Nevertheless, there are two good reasons why such courses as homemaking, consumer education, health, nutrition, child care and development, community service, home decoration, sanitation, etc., should be more often prescribed. The first reason is the increasing complexity of home and community life, with the larger demands on the understanding of the chemistry of foods, vitamins, drugs, of physics and electronics in household equipment, of economic problems in buying foods and home furnishings, of social problems in providing medical and psychological care, and of security in financial and social status. The second reason is the sharply diminishing fund of knowledge and philosophy of household life handed down from mother to daughter due to the dwindling importance of the family in the society of the present day. From the most realistic point of view, 50 per cent of our women, those who do not remain four years for the degree, would spend their time here most profitably in two fields: first, in acquiring some specific career skill, such as secretarial work, or laboratory technology, or piano or voice technique, or in acquiring some degree of facility and background for careers in journalism, drama, radio, music, etc., and second, not in general cultural background courses, but more specifically in homemaking, which would include the study of such sciences as nutrition, child psychology, consumer economics, and certain electives, chosen rather freely to satisfy the individual interest in some aspect of our present culture. Again, from the most realistic point of view, and because the marriage rate is high and the employment period short, the curriculum for the four-year women students would likewise be divided roughly into two parts: (1) specialization for the employment career, and (2) general cultural education which should perhaps be frankly redefined as "education to appreciate the culture of our times."

As we study the changes made by the University administration in the two years since the last of these nine classes (1941) was graduated, it is interesting to note how closely the new trends parallel the suggestions which grow out of the present study. The adaptation of the college curricula to the needs and talents of the individual student has taken great strides in the faculty advisory system which has worked its way successfully through several experimental stages to a high degree of efficiency and sympathetic understanding of students and their problems. The Committee on Women's Education has made systematic investigations of the needs of women students and has suggested many improvements. This committee first systematized the curricula of interest to women in every department of the University,

and the assembled outlines have been published in a convenient pamphlet which women students have found invaluable in planning their vocational training. A new agency has also been established in the office of Vocational Adviser to Women, and large numbers of students from the College of Arts and Sciences especially are planning curricula better suited to their professional advantages as well as to their cultural needs.

Furthermore, student leaders, encouraged by administrative interest and funds, have participated with enthusiasm in conferences and forums on careers, opportunities, and community responsibilities of women. New courses, more attractive facilities, greater prestige, and larger numbers of students have been characteristic developments in the Department of Home Economics. Certain courses in secretarial skills have been recognized as credit courses in the College of Arts and Sciences curricula. The University Residence Centers have established the highest standards of living, both in physical surroundings and in social programs for as many as 700, or from 35 to 45 per cent of our women students. In providing similar centers for men, it has augmented very greatly the influence and the success of these housing units. Most significant of all, the University has in establishing the Junior Division provided the means whereby each new woman student may be free to choose, under the guidance of her adviser, the courses best suited to her needs and her ambitions, and to experiment, with University courses at least for one year, without the fixed adherence to degree requirements.

Appendix—Questionnaire Used in Study

Name Present Address..... Date.....

1. Check the School or College at Indiana University from which you graduated:

- (1) Arts and Sciences
- (2) Business
- (3) Education
- (4) Medicine
- (5) Music
- (6) Law

2. Year of graduation

3. Principal undergraduate major at Indiana University

- (4) What would you say now was the principal influence which caused you to attend Indiana University?

I Personal History

5. Check the one word which best describes your present status:

- (1) Single
- (2) Married
- (3) Widowed
- (4) Separated
- (5) Divorced

6. Year of marriage

7. Number of living children.....

8. If married, check that item which best describes the education of your husband:

- (1) Attended high school.....
- (2) High school graduate.....
- (3) Attended college
- (4) College graduate

9. College of your husband

II Vocational History

10. Did you wish a position at the end of your college career?

11. If so, how many months after graduation did you obtain your first job?.....months.

12. How did you obtain this first position? In the following list, check the three most important sources or agencies assisting you. Check only one in a column.

Source of Assistance	Most Important	2nd Most Imp.	3rd Most Imp.
(1) Professor or dean			
(2) University placement bureaus			
(3) Commercial or other placement agencies			
(4) Former employers			
(5) Family and relatives			
(6) Friends			
(7) Letter of application			
(8) Advertisement			
(9) Personal contact or visit to company			
(10) Others:			

13. Check the one word that best describes your present employment status:

- Permanent
- Temporary
- Housewife
- Student

14. If you are not employed now, check your employment wishes:

- Wish employment
- Do not wish employment.....

15. Relationship of first job to your major course at Indiana University:

- (1) Same as course
- (2) Closely related
- (3) Slightly related
- (4) No relation at all

16. Relationship of present occupation to your university course:

- (1) Same as course
- (2) Closely related
- (3) Slightly related
- (4) No relation at all

17. Have you been unemployed since graduation at any time when you desired a position?

.....

18. If so, the number of times

19. Total number of months unemployed.months.

20. If you are now employed, do you wish another type of position?.....

Specify:

21. Participation in state or local organizations:

.....

.....

22. OCCUPATIONAL EXPERIENCE SINCE GRADUATION: (Please write in information requested below in complete form)

III Educational History

23. Have you done any formal study since college?.....

24. Check the types of post-college study:

- (1) Graduate work
- (2) Extension classes
- (3) Typing and shorthand.....
- (4) Other specialized study....

25. Number of months of advanced study (Do not include vacation period):

..... months.

26. School or institution

27. Major field of advanced study:.....

28. Check highest earned degree:

- (1) Bachelor
- (2) M.D.
- (3) Master's
- (4) Ph.D. or Ed.D.
- (5)

Name and address of employer or firm	Business of firm (e.g., high school, department store, etc.)	Position held (e.g., secretary, teacher, buyer, etc.)	Period Employed		Annual Salary	
			From	To	First	Last

IV Evaluation

How well satisfied are you with your university education? We have roughly classified the college courses into four areas as contributing chiefly to cultural education, preparation for a vocation, training for citizenship, or training for homemaking and parenthood. Please give your reaction to the offerings in each of the four areas for the majors in your field. Check in one of the five spaces opposite each area according to your own college experience and present reaction to work in that area.

Be sure to check in only one space for each line.

	I TOOK COURSES IN THIS AREA			I TOOK NO WORK IN THIS AREA	
	1. and feel satisfied with my selection	2. but feel that my selection was inadequate	3. and feel that there was an overemphasis on this work in my program	4. but feel the lack	5. but do not feel the lack
Four Areas of Education					
I. Cultural Education (Courses in Art, Music, Drama, Literature, Languages, etc.)					
II. Education for a vocation (Courses in Education, Business, Nursing, etc.)					
III. Education for citizenship (Courses in Government, Sociology, Economics, etc.)					
IV. Education for homemaking and parenthood (Courses in Clothing, Foods, Health, Home Decoration, Child Psychology, etc.)					



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